

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of Confirmation No.: 8154  
Serial No. 10/590,309 Art Unit: 1617  
Yuichi OHKAWARA Examiner: Courtney A. Brown  
Filed: October 12, 2006

## DECLARATION UNDER 37 CFR 1.132

Honorable Commissioner of Patents and Trademarks

Sir,

I, Norihisa SAKAMOTO declare that:

I am a citizen of Japan and a resident of c/o Sumitomo Chemical Company Limited of 2-1, Takatsukasa 4-chome, Takarazuka-shi, Hyogo, Japan;

I graduated from Master's Course, Agricultural Biology,  
Graduate School of Agricultural Science, the University of Tokyo,  
Japan in 1994;

I was an employee of Takeda Pharmaceutical Company Limited, Japan, since 1994 until 2007;

I have been an employee of Sumitomo Chemical Company Limited, Japan, since 2007 up to this time;

The experiments set out below were conducted under my supervision and direction.

## EXPERIMENT

## Experiment 1

Insecticidal effect against *Plutella xylostella* through drenching treatment of the soil with the insecticide solution:

A test compound was dissolved by adding acetone containing 5 % of Tween 20 (trade name) at the rate of 0.1 ml per 1 mg of the test compound, and the solution was diluted with ion-exchange water to a total volume of 3 ml. Each of the insecticide solutions prepared was drenched onto the surface of the plant root soil for a cabbage plant grown in a cell tray (with a soil capacity of 24 ml). Four days later, the above-ground part of the plant was cut and placed in a plastic cup, into which 10 heads of 2-instar larvae of *Plutella xylostella* were released. The cup was kept in a breeding chamber controlled at a constant temperature (25°C), and the number of living larvae was counted 4 days later. The death rate of larvae was calculated by the following equation, and the results were shown in Table 1.

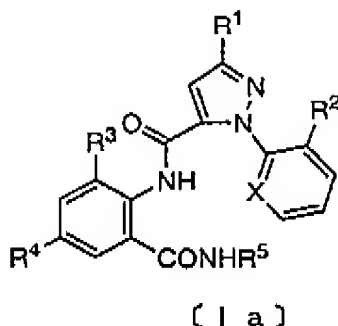
Death rate of larvae (%) =

$$(\text{Number of larvae dead}) / (\text{Number of larvae tested}) \times 100$$

Table 1

Test Compound	Amount applied (mg/plant)	Death rate, 4 days later, (%)
Compound (I-7)*	0.004	10
Thiamethoxam	0.008	0
Compound (I-7) + Thiamethoxam	0.004 + 0.008	60

\* Compound (I-7) is represented by the compound of the formula:

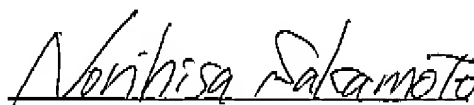


wherein R<sup>1</sup> is Br; R<sup>2</sup> is Cl; R<sup>3</sup> is CH<sub>3</sub>; R<sup>4</sup> is Cl; R<sup>5</sup> is CH<sub>3</sub>; and X is N.

It is clear from Table 1 that the Compound (I-7), when used as a mixture with thiamethoxam, was found to produce a greater insecticidal effect than would be expected when individually used alone, and the synergistic effect due to the mixing was observed.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

This 3<sup>rd</sup> day of August, 2011

  
Norihisa SAKAMOTO